

## ABSTRACT OF THE DISCLOSURE

A mark pattern forming unit forms a mark pattern on a transfer belt, and a reflection type optical sensor detects the mark pattern. An interval difference acquiring unit acquires an interval difference that is a deviation of each mark from a reference position. A speed detector detects a moving speed  $v_1$  of the transfer belt in a period between formation of the mark pattern and the detection of the mark pattern, and a moving speed  $v_2$  during image formation. A speed difference calculating unit calculates a speed difference  $\Delta v = v_1 - v_2$ , and a control unit controls a timing of forming an image based on the interval difference and the value of  $\Delta v$  so as to reduce position misalignment.